



4 October 2024

Submitted to: NEMReform@aemo.com.au

RE: Consultation of ST PASA Procedure and related documents

Shell Energy welcomes the opportunity to comment on the proposed short term projected assessment of system adequacy (STPASA) changes.

About Shell Energy in Australia

Shell Energy is Shell's renewables and energy solutions business in Australia, helping its customers to decarbonise and reduce their environmental footprint. Shell Energy delivers business energy solutions and innovation across a portfolio of electricity, gas, environmental products and energy productivity for commercial and industrial customers, while our residential energy retailing business Powershop, acquired in 2022, serves households and small business customers in Australia.

As the second largest electricity provider to commercial and industrial businesses in Australia¹, Shell Energy offers integrated solutions and market-leading² customer satisfaction, built on industry expertise and personalised relationships. The company's generation assets include 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and the 120 megawatt Gangarri solar energy development in Queensland. Shell Energy also operates the 60MW Riverina Storage System 1 in NSW. Shell Energy Australia Pty Ltd and its subsidiaries trade as Shell Energy, while Powershop Australia Pty Ltd trades as Powershop. Further information about Shell Energy and our operations can be found on our website [here](#).

General Comments

Shell Energy supports AEMO's proposal to allocate daily energy limits firstly to the higher demand periods. An additional consideration that we believe is appropriate is that a unit's volume bid as fixed load or in a participant's band 1 should be dispatched first. This would ensure that technical minimum load for in-service units is appropriately allocated, with the remaining daily energy limit allocated firstly to the high demand periods. The ST PASA procedures document should fully detail how this allocation to high demand periods would be achieved.

Shell Energy recommends that STPASA reliability assessments take account of the potential for regular or routine intra-day recharging of bi-directional units (BDUs) as well as other energy storage systems. This would necessitate consideration of daily energy dispatch greater than registered maximum energy storage levels. This is particularly important during winter months where energy storage systems are observed to charge overnight for discharge during morning peak periods and then recharge during the day for discharge over the evening peak period. Historical observation indicates daily energy output which exceeds the register storage capacity of BDU's occurs routinely. Recognising this dynamic within the STPASA assessment would lead to more robust reliability assessment outcomes.

¹By load, based on Shell Energy analysis of publicly available data.

² Utility Market Intelligence (UMI) survey of large commercial and industrial electricity customers of major electricity retailers, including ERM Power (now known as Shell Energy) by independent research company NTF Group in 2011-2021.

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We seek further clarification regarding how stored energy would be allocated for reliability assessments when a BDU is bid available for discharge. We note that in the pre-dispatch assessment, it isn't clear from the consultation paper why storage would be allocated to the next trading interval when the unit is bid available. We consider it more appropriate to allocate the storage to the highest demand periods. We also note the potential discrepancy between the pre-dispatch reliability assessment and pre-dispatch forecast outcomes which could create confusion. In the case where a BDU's bid available capacity would see it fully discharge if a specific price level is reached, the BDU could be assessed as available to discharge in the reliability assessment but, based on pre-dispatch outcomes not be forecast to discharge. Shell Energy suggests greater clarity be provided in the procedure documents around the treatment of these issues.

A potential solution to improve allocation of stored energy within the reliability assessments is for AEMO to define both morning and evening peak periods and request additional data in participant bids regarding their intentions for storage operations. Morning peak demand periods could be defined as trading interval 06:05 to 09:30 (or 10:00) and evening peak demand periods could be defined as trading intervals 17:05 to 23:00. The ST PASA process document would require that participants who control BDU's submit daily energy limits inclusive of the intention to facilitate overnight and intra-day charging where applicable. Where the submitted daily energy limit exceeded a BDU's registered storage capacity, this additional storage would be allocated solely to the morning peak demand period first. In the pre-dispatch reliability assessment, energy would be allocated firstly on the basis of pre-dispatch outcomes with any remaining energy allocated to the forecast highest demand periods first. In the ST PASA reliability assessment, energy would be allocated to the morning and evening peak demand periods separately based on the submitted daily energy limit allocating as suggested above. This would provide a market-based approach reflecting the participants best available information at the time the ST PASA submission is made. It would also facilitate improved accuracy in the ST PASA and pre-dispatch reliability assessments and help reduce the occurrence of false positive LOR declarations.

Detailed ST PASA Information to be Published

Shell Energy recommends that the Pre-dispatch and ST PASA reliability assessment output files should contain additional availability, PASA availability and Unconstrained Intermittent Generation Forecast (UIGF) information on an individual Dispatchable Unit Identifier (DUID) basis. The current lack of transparency in the area should be rectified as soon as possible. Semi-scheduled generators currently submit maximum availability and PASA availability values and these values should be transparent on the same basis as it is for scheduled resources.

Shell Energy considers that the publication of scheduled load information would be beneficial to market participants. We suggest that load used to charge batteries and pumped hydro should be reflected in the demand forecast component of the pre-dispatch and ST PASA reliability assessment outputs. Ideally this information would be published as disaggregated data from the normal demand forecast to allow analysis independent from existing demand data. This information will become more important as the NEM incorporates greater numbers of batteries.

Where the pre-dispatch or ST PASA assessments determine a power system security issue, this should be clearly stated via a power system security deficiency market notice. We believe such notices should provide full details of the identified power system security issue and the latest time to intervene. This approach would be similar to how lack of reserve periods are notified to the NEM.

Shell Energy supports the continued publication of separate pre-dispatch and ST PASA reliability assessments. More detailed assessment through the pre-dispatch process is appropriate as more accurate information is available closer to dispatch. Conversely, we support the removal of the LRC analysis from either the pre-dispatch or ST PASA reliability assessment as these assessments appear to be redundant.



Yours sincerely

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